

IN THE CLAIMS:

Please cancel claims 1-22 without prejudice or disclaimer, and substitute new Claims 23-44 therefor as follows:

Claims 1-22 (Cancelled).

23. (New) An optical communication line comprising:

a first optical connection with accumulated chromatic dispersion at least partially compensated and comprising:

a first optical waveguide portion directly connectable to an output of a first processing station of electromagnetic radiation at a pre-established wavelength; and

a second optical waveguide portion coupled to the first portion;

an amplifying station provided with a first input directly connected to the second portion in order to receive the radiation and with a first output for amplified radiation;

a second optical connection with at least partially compensated accumulated dispersion and comprising:

a third optical waveguide portion directly connected to the first output;

a fourth optical waveguide portion coupled to said third portion and directly connectable to a second input of a second processing station, said first and third portions being associated to respective first order chromatic dispersions having opposite signs,

at least said first and third portions being associated to respective first order chromatic dispersions having, at the pre-established wavelength, a corresponding absolute value lower than or equal to $13 \text{ ps}^2/\text{Km}$.

24. (New) The communication line according to claim 23, wherein at least said first and third portions are associated to respective first order chromatic dispersions having, at the pre-established wavelength, a corresponding absolute value lower than $10 \text{ ps}^2/\text{Km}$.

25. (New) The communication line according to claim 23, wherein at least said first and third portions are associated to respective first order chromatic dispersions having, at the pre-established wavelength, an absolute value greater than $0.5 \text{ ps}^2/\text{Km}$.

26. (New) The communication line according to claim 25, wherein at least one of said first and third portions is associated to respective first order chromatic dispersion having, at the pre-established wavelength, an absolute value greater than $1 \text{ ps}^2/\text{Km}$.

27. (New) The communication line according to claim 23, wherein the first and the second optical connections are substantially formed by waveguide portions having, at the pre-established wavelength, first order chromatic dispersions in absolute value lower than $13 \text{ ps}^2/\text{Km}$.

28. (New) The communication line according to claim 23, wherein said waveguide portions are substantially formed by optical fibers.

29. (New) The communication line according to claim 23, wherein said first station is such as to send on the first portion radiation having a first power value and said amplifying station is such as to send on the third portion amplified radiation having

a second power value, the first and the third portions being such that the product of a non linearity coefficient associated to the first portion and said first power value is substantially equal to the product of a nonlinearity coefficient associated to the third portion and said second power value.

30. (New) The communication line according to claim 23, wherein the waveguides of said first portion and said third portion present effective areas of a value greater than or equal to $40 \mu\text{m}^2$.

31. (New) The communication line according to claim 30, wherein the waveguides of said first portion and said third portion present effective areas of a value greater than or equal to $50 \mu\text{m}^2$.

32. (New) The communication line according to claim 23, wherein said first and second optical connections present a substantially zero accumulated dispersion.

33. (New) The communication line according to claim 23, wherein each of said first and second optical connections is composed of two directly coupled portions of optical fiber having chromatic dispersions of opposite signs.

34. (New) The communication line according to claim 23, wherein said first and second optical connections include single mode optical fibers.

35. (New) The communication line according to claim 23, wherein said first processing station is an information signal transmission station including at least one source of radiation at a wavelength suitable for propagation in optical fiber.

36. (New) The communication line according to claim 23, wherein said second processing station is an information signal receiving station.

37. (New) The communication line according to claim 35, wherein said transmission station is such as to generate optical pulse signals.

38. (New) The communication line according to claim 23, wherein said first processing station is a radiation amplifying station and said second processing station is a further radiation amplifying station.

39. (New) The communication line according to claim 23, wherein at least said first and said second optical connections have a length greater than or equal to 40 km.

40. (New) The communication line according to claim 39, wherein said length is greater than or equal to 80 km.

41. (New) The communication line according to claim 23, wherein said first and second optical connections present substantially zero accumulated dispersion slope.

42. (New) A method for manufacturing an optical line for a communication system, comprising the following steps:

providing a first processing station provided with an output for electromagnetic radiation having a pre-established wavelength;

connecting a first input of an amplifying station to the first station to receive radiation, the amplifying station being provided with a first output for amplified radiation;

placing a first optical connection including at least a first portion of optical waveguide directly connected to said output and a second portion of optical

waveguide directly connected to the first input, said first connection having at least partially compensated accumulated chromatic dispersion;

placing a second optical connection having at least partially compensated accumulated chromatic dispersion and including a third portion of optical waveguide directly connected to the first output and a fourth portion of optical waveguide directly connectable to a second processing station; and

choosing said first and third portions in such a way that they are associated to respective first order chromatic dispersions of opposite signs and an absolute value, calculated at the pre-established wavelength, lower than or equal to $13 \text{ ps}^2/\text{Km}$.

43. (New) A method for limiting the non linear effects in an optical communication system, comprising the following steps:

supplying a first optical connection including at least a first portion of optical waveguide coupled to a second portion of optical waveguide, said first connection having at least partially compensated accumulated chromatic dispersion;

introducing electromagnetic radiation having a first wavelength in said first portion of optical waveguide;

amplifying the radiation leaving said second portion;

propagating said amplified radiation in a second optical connection having at least partially compensated accumulated chromatic dispersion and including a third portion of optical waveguide coupled to a fourth portion of optical waveguide, said first and third portions being associated to respective first order

chromatic dispersions of opposite signs and a respective absolute value,
calculated at the pre-established wavelength, lower than or equal to $13 \text{ ps}^2/\text{Km}$.

44. (New) A communication system comprising:

a first processing station provided with an output for electromagnetic
radiation having a pre-established wavelength;

an amplifying station provided with a first input connected to the first
station to receive the radiation and with a first output for amplified radiation;

a first optical connection having at least partially compensated
accumulated chromatic dispersion and including at least a first portion of optical
waveguide directly connected to said output and a second portion of optical
waveguide directly connected to the first input;

a second optical connection having at least partially compensated
accumulated chromatic dispersion and including at least a third portion of optical
waveguide directly connected to the first output and a fourth portion of optical
waveguide directly connectable to a second processing station, said first and
third portions being associated to respective first order chromatic dispersions of
opposite signs,

at least said first and third portions of fiber being associated to respective first
order chromatic dispersions with an absolute value, at the pre-established
wavelength, lower than or equal to $13 \text{ ps}^2/\text{Km}$ respectively.